



Industrial Telecommunications Association, Inc.

February 25, 2002

William F. Caton, Acting Secretary  
Federal Communications Commission  
Office of the Secretary  
445-12th Street, SW  
Washington, DC 20554

Re: Nextel White Paper Regarding Elimination of CMRS—Public Safety Interference  
ET Docket No. 00-258

Dear Mr. Caton:

On February 22, 2002, Sheldon Bentley of Boeing, Inc., Laura L. Smith and Jeremy Denton of the Industrial Telecommunications Association, Inc. (ITA), and our counsel, Bob Pettit, met with Bryan Tramont, Legal Advisor to Commissioner Kathleen Abernathy, to discussed the above-referenced White Paper. At the meeting, ITA reiterated the views previously stated in a December 20, 2001, letter to Chairman Michael K. Powell. Furthermore, ITA offered a statement to the Bureau, outlining the potential impact of the Nextel proposal on a selection of 800 MHz Business and Industrial/Land Transportation licensees.

A copy of the December 20<sup>th</sup> letter and the impact statement are enclosed. If I may be of any assistance, please do not hesitate to contact me via e-mail at [jdenton@ita-relay.com](mailto:jdenton@ita-relay.com) or by calling 703-528-5115.

Sincerely,

Jeremy Denton  
Director, Government Affairs

Enclosures

**CICS**

Council of Independent  
Communication Suppliers

**TELFAC**

Telephone Maintenance Frequency  
Advisory Committee

**TLCC**

Taxicab and Livery  
Communications Council

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December 20, 2001

The Honorable Michael K. Powell  
Chairman  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, DC 20554

**In Re: Resolution of CMRS Interference to 800 MHz Public Safety Systems**

Dear Mr. Chairman:

For decades, our organizations have represented America's leading industrial enterprises in spectrum-related matters before the FCC and other Federal Government agencies. Collectively, the members of our associations operate as utilities (water, electrical and gas), railroads, pipelines, petroleum and chemical companies, airlines, manufacturers (automobiles, aircraft, machinery, etc.), package delivery carriers, agricultural interests and virtually every other form of business venture now being conducted within the United States. It is safe to say that our members represent the heart and soul of American industrial productivity.

We write to you today on behalf of these interests in reference to the plan submitted by Nextel Communications, Inc. ("Nextel") to realign the 800 MHz band in order to reduce the amount of interference that Nextel systems are causing public safety and other private wireless licensees, many of which have their own fire, medical, and security departments and mutual aid agreements with nearby communities.<sup>1</sup> As the Commission develops its initial proposals on this matter, it must understand that **FCC adoption of the proposals contained in the Nextel White Paper would be an unmitigated disaster from an operational and financial standpoint for America's industrial, transportation and utility sectors.** If adopted as Nextel proposes, this interference solution will disrupt the provision of mission-critical communications and impose billions of dollars of costs on American businesses to relocate operational communications systems that are not causing any interference to public safety operations.

Please recognize that our associations are very supportive of public safety's need for interference free communications and any equitable FCC efforts to minimize public safety interference. Our preliminary view, however, is that alternative solutions must exist that do not pose the same hardships on private wireless users. We therefore urge the Commission to fully explore remedies such as filtering and greater reliance on

<sup>1</sup> *Promoting Public Safety Communications: Realigning the 800 MHz Land Mobile Radio Band To Rectify Commercial Mobile – Public Safety Interference And Allocate Additional Spectrum To Meet Critical Public Safety Needs*, Nextel Communications, Inc., ET Docket Nos. 00-258 and 95-18, IB Docket No. 99-81, WT Docket No. 99-87, (submitted November 21, 2001) (hereinafter "Nextel White Paper").

frequency coordination to better address what, to date, has been an interference problem caused principally by Nextel. While frequency swaps may be necessary to resolve interference situations, we are not convinced that private wireless systems must be unilaterally evicted from the 800 MHz band. Our organizations are fully engaged with our memberships and will provide the Commission with specific recommendations in the coming weeks.

To help illustrate our point and to remind the FCC of the mission-critical nature of many private wireless applications, we ask that you please consider the following as a small sampling of existing 800 MHz private wireless systems that would be forced to absorb relocation costs should the Nextel plan be adopted:

- **Federal Express Corporation:** FedEx has invested more than \$100 million for its nationwide 800 MHz internal communications system used to coordinate its package-delivery couriers as well as to provide maintenance and security ground support to aircraft and to assist in the loading and unloading of aircraft and trucks. The current system supports more than 40,000 mobile units with approximately 750 base stations. It is estimated that a replacement system in either the 700 MHz or 900 MHz bands would cost FedEx at least \$100 million.
- **ARINC:** ARINC has recently unveiled a new digital service at nine airports that is based on Motorola's IDEN technology. The new system is integrated with ARINC's existing nationwide and global communications networks to support all ground operations including baggage handling, maintenance and airport security. There are plans to install the system at all of ARINC's major domestic and international airports in the near future. ARINC has already invested \$13 million for its digital system, which could not be retuned to operate in either the 700 MHz or 900 MHz bands. ARINC further estimates that there is approximately \$1 million in embedded invested infrastructure at each of the remaining top 50 airports. Each of these systems supports between 3,000 and 5,000 mobile radios, which have an additional cost of \$600 to \$1,000 per radio. Therefore, ARINC estimates the total impact of relocating the airline's 800 MHz systems at more than \$160 million.
- **American Electric Power Company:** American Electric Power Company (AEP) operates one of the largest private radio 800 MHz trunked systems in North America. Covering approximately 200,000 square miles in parts of eleven states, AEP's system offers radio coverage in many areas where commercial wireless service is not available and is therefore vital to maintaining the safety of life and property in AEP's service territory. Using more than 258 trunked radio tower sites, this network is used by AEP's internal distribution and transmission crews to perform service and restoration work on electrical transmission and distribution systems. AEP estimates that it has invested approximately \$100 million in this wireless infrastructure.

Combined, these three users alone estimate total relocation costs amounting to over \$350 million. As we acquire additional data from the hundreds of other affected licensees, it is clear that the total cost of relocating displaced 800 MHz incumbent users will exceed several billion dollars. We emphasize that these costs would be imposed on users that 1) are not causing any interference to public safety systems and 2) have also assumed additional safety-related responsibilities since September 11, 2001. Indeed, the protection of critical infrastructures, which has been a significant focus of recent Congressional and the Executive Branch activities, is an effort that would be seriously harmed through the implementation of this proposal as submitted.

Our great concern is that Nextel is trying to unfairly solve an interference problem of its own making at the expense of private wireless users. While we pledge to work with public safety, Nextel and the FCC to help resolve cases of interference, we look forward to the development of a more balanced and equitable solution that recognizes that the wholesale disruption to 800 MHz band private wireless systems threatens this nation's economy and the protection of its workers and citizens.

Respectfully Submitted,

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Nextel's proposal affects 4,004 licenses in the Business/Industrial Land Transportation Pools in the 800 MHz. A few examples are listed below:

### **Federal Express Corporation**

Federal Express (FedEx), an express package delivery service, uses its 800 MHz internal communications system, to coordinate its extensive network of couriers in the job of picking up and delivering packages, as well as to provide maintenance, security ground support to aircraft, and load and unload aircraft and trucks.

FedEx has a substantial investment in the 800 MHz band, totaling more than \$100 million. If the company were to move out of the 800 MHz band, its equipment could not be "re-tuned." It will have to be replaced at around \$2,000 per unit, times 40,000 units. Additionally, the replacement cost of 750 base stations and related antenna costs is around \$25 million each.

### **ARINC, Inc.**

ARINC, Inc., owned by airlines and aircraft operators, provides voice and data radio communications to the aviation industry through sharing the assigned frequency spectrum, radio facilities, and satellites.

ARINC and Motorola, Inc. recently jointly rolled out the new service—ARINC Wireless Dispatch Service—at the nine airports recently and plan to install the system at all of ARINC's major domestic and international airports in the near future.

The new system, an industry milestone, is based on digital IDEN technology, combined with ARINC's nationwide and global communication networks. This means a baggage handler on the West Coast can speak to a customer service representative on the East Coast at the push of a button, without airtime message costs. ARINC Wireless Dispatch Service is priced at a flat rate, without connection charges, to promote direct end-to-end messaging.

ARINC's conversion to 800 MHz IDEN, cost it \$13 million for infrastructure, antennas and mobiles. There is no IDEN equipment available at 900 MHz or 700 MHz.

The private wireless infrastructure for the rest of the airline industry is also staggering. In the top 60 airports, minus the nine converted by ARINC, there is approximately \$1 million in embedded infrastructure at each, which equals a total investment of \$51 million. Mobile radios represent an even larger embedded investment. Airports have from 3,000 to 5,000 users of radios, which cost from \$600 to \$1,000 a piece. Conservatively, if you estimate, 3,000 workers times \$600 radios at 51 airports, minus the converted airports, the embedded investment is approximately \$100 million. The total impact of a relocation of these systems, in reference to embedded equipment, is \$164 million.

### **Northwest Airlines**

In Minneapolis, Minnesota, Northwest Airlines uses private wireless systems to coordinate hundreds of ground crew assisting in the safe, efficient management of the 400-plus aircraft that make up their fleet.

These crews handle a dispatch call volume of 20,000 transmissions a day in the performance of all activity surrounding the aircraft on the ground, such as security, repairs and maintenance, refueling, baggage handling, cargo loading, food service, cleaning, and lavatory service.

In particular, for inbound and connecting passengers, their luggage, freight and mail must be directed to the appropriate destinations. The aircraft is prepared for the next flight by cleaning, fueling and aircraft maintenance inspections. Outbound freight, mail and checked luggage are loaded before and during the passenger boarding process.

Nationwide, Northwest has almost 1,000 pieces of private wireless communications equipment using an 800 MHz system.

### **United Airlines**

United Airlines has an 800 MHz trunked radio system in use at the Denver Airport, which provides all the communications for the many interdependent actions that must be completed when flights arrive and before the airplane is ready to leave.

For United to relocate, its infrastructure would have to be duplicated before a change could take place. A second radio equipment building would have to be constructed before new equipment could be installed.

The minimum cost for replacement equipment is \$1.5 million. Portable radios, installation labor, engineering fees or construction costs are not included.

### **Utility Communications**

"Nextel's proposal, while politically attractive on the surface, would cause significantly more harm than it would solve," said Jill Lyon, UTC Vice President and General Counsel. "In calling for the forced migration of thousands of private wireless systems to inadequate and often unavailable spectrum, Nextel's proposal would endanger the ability of utilities, water systems and energy companies to provide basic, critical services to the people of the United States."

Potentially, the Nextel proposal would endanger the \$500 million private wireless communications investment of the six largest utilities.

### **American Electric Power Company (AEP)**

AEP operates one of the largest private radio 800 MHz Trunked Radio Systems in North America covering approximately 200,000 square miles of service territory in parts of eleven states, providing a major infrastructure investment. The system is made up of over 258 trunked radio tower sites operating approximately 1,000 separate radio channels over the 258 sites. The system is used by AEP's internal Distribution and Transmission crews to perform, service and restore work on electrical transmission and distribution systems.

The work they perform includes service, restoration, and the switching of high voltage equipment. The AEP 800 MHz trunked radio system is critical to AEP's ability to safely and efficiently provide electrical power service to the American Public (our customers). Furthermore, AEP's trunked radio system serves several similar eligible users, one of which is a medical helicopter service.

Much of AEP's service territory is in rural locations where there is no commercially available alternative to our internal private trunked radio system. In addition, there are reasons of reliability and availability of service that cause AEP to operate its own private radio system. AEP has a significant investment in its 800 MHz trunked radio system. The Nextel Proposal in its present form would put tremendous financial and operational burdens on AEP, and will adversely affect AEP's ability to provide reliable service and timely electric service restoration.

### **Interstate Power Company**

Interstate Power Company, based in Iowa, has 900 employees spread out over a 10,000 square mile area, maintaining a power grid for 161,000 customers in southern Minnesota, northern Iowa and northwest Illinois. To coordinate that workforce, Interstate Power uses an 800 MHz trunked system, which includes 48 repeater transmitters at 36 sites, supporting 52 control stations, 330 mobile radios and 90 portable radios.

### **Duke Power Company**

Duke Power Company operates an 800 MHz integrated wide-area telecommunications system that covers a 20,000 square-mile service area encompassing large sections of North and South Carolina. The radio system is required to maintain the safe and efficient provision of electricity to more than 2 million customers throughout the Carolinas.

Duke Power's base cost estimate for re-locating to the 900 MHz or 700 MHz bands is \$30 million. This includes replacement of 5500 subscriber units, 175 base stations, RF and antenna equipment, as well as power backup.

### **Lyondell/Equistar Chemicals LP**

Equistar Chemicals, LP is a \$6.5 billion chemical company that was formed in 1997. Lyondell Chemical Company owns 41 percent of the Equistar partnership, while Millennium Petrochemicals and Occidental Petroleum Corporation each own 29.5 percent.

Equistar is one of the largest producers of ethylene, propylene and polyethylene in the world today, paying attention to even the smallest needs of our customers. They are a leading producer of polypropylene, oxygenated chemicals, performance polymers, and wire and cable resins and compounds. They are an industry leader with an unwavering commitment to being the premier petrochemicals and polymers company in the world.

Lyondell Chemical Company (NYSE: LYO) is a global manufacturer and marketer of basic chemicals and polymers that enhance the quality of life. Items that you use every day are made possible or are made better, safer and more convenient because of their daily operations.

Their products are the basic elements that go into products you use every day, such as food packaging, automobile parts, clothing and personal grooming aids, home building materials, household products carpeting, furniture, fabrics, wall coverings, etc.

Lyondell/Equistar has \$3 million invested in 800 MHz radio systems. This company uses private wireless for OSHA-required emergency communications, SCADA, employee dispatch and pipeline control.

### **General Transportation, Inc. (Red Top Cab)**

The \$5 billion taxicab, limousine and paratransit industry consists of 6,300 taxi fleets nationwide operating 235,000 vehicles. Each of these companies depend on private wireless systems to effectively communicate pickup and delivery information.

General Transportation in Arlington, Virginia, dispatches hundreds of taxi trips a month, each trip requiring 10 to 20 transmissions. The 800 MHz private wireless communication system that makes all of this happen cost the company approximately \$3 million.